



A summer of virtual STEM activities

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STEM education nonprofit (and long-time partner of the Laboratory) [STEM Santa Fe](#) is expert at providing hands-on opportunities for young people across Northern New Mexico to explore science, technology, engineering and mathematics skills and careers.

Between the start of the 2019-20 school year and the start of lockdown restrictions, the organization had already reached about 675 students at Santa Fe Indian School, Santa Fe Community College and Capital High School, held two math festivals, one STEM conference for girls, and four monthly workshops.

But when the COVID-19 pandemic arrived, founder and CEO Lina Germann didn't see it as an opportunity for a well-deserved rest.

"The pandemic has proven that STEM skills are in every career and aspect of our lives," she explains. "We need science to understand how the virus spreads; technology to manage our jobs from home; engineering to build a slide outdoors or fix an appliance; and finally, we need mathematics in order to comprehend the graphs and charts presented to us in the news.

"We also need art as an outlet and a distraction away from the harsh reality of this pandemic, in other words, we need all the STEAM we can get!"

With that in mind, the organization quickly pivoted to providing their programming virtually.

Festivals, workshops and camps

They ran an online math festival for 55 students in May, two virtual workshops for girls in June, and have just completed a summer program of six free, hands-on STEM summer camps for middle school and high school students.

Topics included 3D design, app development, engineering, and bioinformatics. To keep the hands-on components for many of the programs, STEM Santa Fe prepared kits of parts and materials and got them out to the attendees.

Overall, 67 students took part in the camps, which ran from June 8 to August 7. Students came from Rio Arriba, Santa Fe, Los Alamos, and Sandoval counties.

An eye on equity and diversity

Given the organization's concern for equity and diversity in STEM education, it was important to try to tackle some of the barriers to taking part that some students faced.

A laptop loan program made the summer camps accessible to more people, and one of the camps was offered in Spanish.

"One silver lining of online instruction is that we have been able to engage students in rural areas of the region that might not have been able to attend in-person camps," says Germann, who was recently named the winner of the [2020 Businesswoman in Education](#) award by the *Albuquerque Journal*.

The Laboratory and its employees have been helping STEM Santa Fe in several ways. A sponsorship from Laboratory operator Triad has provided financial support, Lab researcher Wes Hicks spoke to the 3D design campers and Patrick Garcia, the Senior Director for the Non-Nuclear Production Office at the Laboratory spoke to the DNA Detective campers.

Lab scientist Kara Luitjohan has coordinated a range of workshops for the girls in STEM Santa Fe's programs and served on the planning committee for the 2019 STEM Pathways for Girls conference. "She is one of our most valued volunteers," says Lina, who is clear about her organization's priorities for the future.

"We are determined to continue with virtual STEM programming as long as the threat of COVID-19 is looming," she says. "We are doing what we can get in order to recover economically, emotionally and mentally from this pandemic we have been engulfed in."

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